We claim

1. A cassette for cell screening, comprising
   a) a substrate having a surface;
   b) a fluid delivery system mated with the substrate, wherein the fluid delivery system comprises:
      1) a three by three matrix of openings or depressions, wherein each region of the substrate enclosed by the opening or depression in the matrix comprises an individually addressable domain; and
      2) microfluidic channels that supply fluid to the domains.

2. The cassette of claim 1, wherein each domain comprises cell binding sites separated by cell repulsive regions.

3. The cassette of claim 2, wherein each domain comprises a single cell type arrayed on the cell binding sites.

4. The cassette of claim 3 wherein the cell expresses one or more biosensors.

5. The cassette of claim 4 wherein at least three different cell types are arrayed on the surface.

6. The method of claim 5 wherein each of the three different cell types are specific for different tissue types.

7. The cassette of claim 6 wherein the three different tissue types are connective tissue, neuronal tissue, and immune system.

8. A method for cell screening, comprising:
   a) providing the cassette for cell screening of any of claims 3-7;
   b) providing an optical system to obtain images of the cells;
   c) contacting the domains with a test compound
   d) obtaining images of the cells to determine an effect of the test compound on the cells.

9. A method for detecting a toxin pathway and organ localization, comprising
   a) providing the cassette for cell screening of claim 5-7
   b) providing an optical system to obtain images of the cells;
   c) contacting the domains with a test sample potentially comprising a toxin;
   d) obtaining images of the cells to determine an effect of the toxin on the cells, wherein the effect of the toxin on the cells indicates the toxin pathway and organ localization.

10. The method of claim 9, wherein the one or more biosensors expressed by the cells are selected from the group consisting of detectors, classifiers, and identifiers.

11. An automated method for cell based toxin detection and organ localization comprising

-providing an array of locations containing cells to be treated with a test substance, wherein the array comprises at least a first cell type and a second cell type, and wherein the first cell type and the second cell type are not contained on the same location in the array; wherein the first and second cell types are derived from different organ types; wherein each of the cell types comprises at least one luminescent reporter molecule; wherein the localization, distribution, structure, or activity of the at least one luminescent reporter molecule is altered by a toxin to be detected;

-contacting the at least first cell type and second cell type with the test substance either before or after possession of the at least one luminescent reporter molecules by the first cell type and the second cell type;

-imaging or scanning multiple cells in each of the locations containing the first cell type or the second cell type to obtain luminescent signals from the luminescent reporter molecule in the first cell type and the second cell type;

-converting the luminescent signals into digital data;

-utilizing the digital data to automatically measure the localization, distribution, structure or activity of the at least one luminescent reporter molecule on or in the first cell type and the second cell type, wherein a change in the localization, distribution, structure or activity of the luminescent reporter molecule indicates the presence of a toxin and an organ localization of the toxin.

12. The method of claim 11, wherein the array further comprises a third cell type, wherein the first, second, and third cell types are not contained on the same location in the array; and wherein the first, second, and third cell types are derived from different organ types.

13. The method of claim 11 or 12 wherein one or more of the cell types further comprises at least a second luminescent reporter molecule; wherein the localization, distribution, structure, or activity of the second luminescent reporter molecule is altered by a toxin to be detected.

14. The method of claim 13 wherein one or more of the cell types further comprises at least a third luminescent reporter molecule; wherein the localization, distribution, structure, or activity of the third luminescent reporter molecule is altered by a toxin to be detected.